

Application No.: 10/657,092

Docket No.: 1315-045

REMARKS

The Abstract has been amended to conform with U.S. practice.

Applicants note the indication of claims 3 and 5-12 containing allowable subject matter. To this end, claims 1 and 3 as filed (except for syntax changes and changes to assure infringement when the goods are sold) have been combined, as have claims 1 and 5 (except for syntax changes and changes to assure infringement when the goods are sold) have been combined. Therefore, claims 3 and 5-12 (claims 6-12 being dependent on claim 5) are allowable.

Applicants add claims 13-19. All of these claims depend on amended claim 1. Claim 13 includes the limitations of former claim 3. Claim 14 includes the limitations of former claim 4. Claim 15 includes the limitations of former claim 6. Claim 16 includes the limitations of former claim 7. Claim 17 includes the limitations of former claim 8. Claim 18 includes the limitations of former claim 9. Claim 19 includes the limitations of former claim 11.

Claim 1 has been amended so it more specifically defines applicants' contribution to the art by requiring the welder to be transferred from the welding portion of the first piston member. This amendment enables claim 1 to distinguish from Tochigi et al. (US 2001/0040179-A1), previously relied on to reject claims 1, 2 and 4 as being anticipated under 35 U.S.C. 102(e). Tochigi discloses a friction stir welding apparatus for joining auto parts. The friction stir welding apparatus comprises chucking arms (11,13) (*rotating support*), transferable rotatable joining devices (19) (*welder*), vertically movable

Application No.: 10/657,092

Docket No.: 1315-045

supporting rollers (6b,7b,8b) (*support rollers*) mounted on the lower side of the workpieces. A pressing member (17) (*guide member*) controls position. Two rollers (7b) are rotatably mounted adjacent a supporting member (7) (*supporting stand*) on the base member (5) (*table*).

In Tochigi, a joining device (19) (*welder*) is attached to a lift (not shown) that raises and lowers the welder (See paragraph [0052] and Figs. 1, 4)). The welder is not moved horizontally to a bridge portion of the first piston member after friction stir welding. Therefore, a welding hole is formed on the welded portion. When a coating film is applied to the piston, the coating film is not formed uniformly in the region where the hole is formed. Thus, an abrasion process is performed eccentrically, resulting in reduced durability of the piston.

In amended claim 1, because the welder is moved to bridge portion (non-coating area) a hole is not formed on the welded portion and a uniform coating film can be formed.

For the foregoing reasons, structure of claim 1, as amended, is patentable over Tochiga.

In view of the foregoing amendments and remarks, allowance is in order.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of

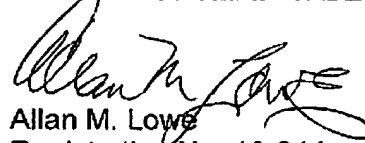
Application No.: 10/657,092

Docket No.: 1315-045

this paper, including extension of time fees, to Deposit Account 07-1337 and please credit any excess fees to such deposit account.

Respectfully submitted,

**LOWE HAUPTMAN & BERNER, LLP**



Allan M. Lowe  
Registration No. 19,641

Customer Number: 22429  
1700 Diagonal Road, Suite 300  
Alexandria, Virginia 22314  
(703) 684-1111  
(703) 518-5499 Facsimile  
Date: March 7, 2005  
AML/tal